

CLAIMS

We claim:

- 1        1. A lubricating system affixed to and rotating with a  
2 rotary shaft having a plurality of lubricated bearings, the  
3 lubricating system comprising:
  - 4              a first bracket portion;
  - 5              a second bracket portion diametrically opposite said first  
6 bracket portion, and coplanar therewith;
  - 7              a third bracket portion, axially spaced apart from said  
8 first bracket portion and parallel thereto;
  - 9              a fourth bracket portion diametrically opposite said third  
10 bracket portion, and coplanar therewith;
  - 11             each said bracket portion having a semicircular  
12 configuration with a first end, a second end opposite said first  
13 end, an inner diameter adapted for mounting on the rotary shaft,  
14 and an outer diameter larger than said inner diameter;
  - 15             each said bracket portion further including at least one  
16 automatic lubricator passage disposed therethrough, between said  
17 inner diameter and said outer diameter;
  - 18             an automatic lubricator disposed within each said automatic  
lubricator passage;

20       a lubrication line extending from each said automatic  
21      lubricator to each of the rotary shaft bearings;

22       a plurality of bracket portion spacer fittings for securing  
23      together and spacing apart said first and said third bracket  
24      portion from one another, and for securing together and spacing  
25      apart said second and said fourth bracket portion from one  
26      another; and

27       a plurality of bracket portion clamp fittings for securing  
28      said first and said second bracket portion together and for  
29      securing said second and said fourth bracket portion together,  
30      and clamping the rotary shaft immovably within and relative to  
31      said first through said fourth bracket portion.

1       2. The lubricating system according to claim 1, wherein  
2 said plurality of bracket portion spacer fittings comprises:  
3           at least one medial spacer disposed between said first and  
4 said third bracket portion and between said second and said  
5 fourth bracket portion;  
6           each said medial spacer further including a threaded axial  
7 passage formed concentrically therethrough;  
8           each said bracket portion further including at least one  
9 medial spacer attachment passage therethrough; and  
10          a plurality of bracket assembly bolts securing each said  
11 bracket portion to each said medial spacer.

1       3. The lubricating system according to claim 1, wherein  
2 said plurality of bracket portion clamp fittings comprises:

3           at least one first end spacer disposed between said first  
4 and said third bracket portion and between said second and said  
5 fourth bracket portion;

6           at least one second end spacer disposed between said first  
7 and said third bracket portion and between said second and said  
8 fourth bracket portion;

9           each said first end spacer and each said second end spacer  
10 further including a threaded axial passage formed concentrically  
11 therethrough and a passage formed diametrically therethrough;

12          each said end of each said bracket portion further  
13 including at least one spacer attachment passage formed  
14 therethrough;

15          a plurality of bracket assembly bolts securing each said  
16 bracket portion to each said first end and second end spacer;

17          a plurality of bracket first end clamping bolts disposed  
18 diametrically through each said first end spacer;

19          a plurality of bracket second end clamping bolts disposed  
20 diametrically through each said second end spacer; and

21          each of said bolts having a head end and a nut secured  
22 opposite said head end and clamping corresponding said first end  
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(703) 486-1000 23 and said second end spacers therebetween, thereby clamping said

24 first through said fourth bracket portion about the rotary  
25 shaft.

1       4. The lubricating system according to claim 1, further  
2 including a grommet disposed within each said automatic  
3 lubricator passage.

1       5. The lubricating system according to claim 1, wherein  
2 each said bracket portion further includes:

3       a plurality of lubrication line clearance passages formed  
4 therethrough;

5       a plurality of lubrication line anchor passages formed  
6 therethrough; and

7       each of said lubrication line anchor passages further  
8 including a bulkhead fitting installed therein.

1       6. The lubricating system according to claim 1, wherein  
2 each said automatic lubricator is controlled by an internal  
3 timer.

1       7. The lubricating system according to claim 1, wherein  
2 each said automatic lubricator is controlled by an internal  
3 receiver receiving signals from an external transmitter.

1       8. The lubricating system according to claim 1, wherein  
2 each said bracket portion is formed of aluminum.

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1       9. A rotating shaft having a plurality of lubricated  
2 bearings thereon and a lubricating system affixed thereto and  
3 rotating therewith, comprising in combination:  
4           a rotating drive shaft having a first bearing end and a  
5 second bearing end opposite said first bearing end;  
6           a first plurality of rotating bearings disposed at said  
7 first bearing end;  
8           a second plurality of rotating bearings disposed at said  
9 second bearing end;  
10          a first bracket portion;  
11          a second bracket portion opposite said first bracket  
12 portion, and coplanar therewith;  
13          a third bracket portion, spaced apart from said first  
14 bracket portion and parallel thereto;  
15          a fourth bracket portion opposite said third bracket  
16 portion, and coplanar therewith;  
17          each said bracket portion having a semicircular  
18 configuration with a first end, a second end opposite said first  
19 end, an inner diameter essentially equal to the diameter of the  
20 rotary shaft, and an outer diameter larger than said inner  
21 diameter;

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22       each said bracket portion further including at least one  
23       automatic lubricator passage disposed therethrough, between said  
24       inner diameter and said outer diameter;

25       an automatic lubricator disposed within each said automatic  
26       lubricator passage;

27       a lubrication line extending from each said automatic  
28       lubricator to each of said rotating bearings;

29       a plurality of bracket portion spacer fittings for securing  
30       together and spacing apart said first and said third bracket  
31       portion from one another, and for securing together and spacing  
32       apart said second and said fourth bracket portion from one  
33       another; and

34       a plurality of bracket portion clamp fittings for securing  
35       said first and said second bracket portion together and for  
36       securing said second and said fourth bracket portion together,  
37       and clamping said rotating drive shaft immovably within and  
38       relative to said first through said fourth bracket portion.

1       10. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein said plurality of bracket portion  
3 spacer fittings comprises:

4           at least one medial spacer disposed between said first and  
5 said third bracket portion and between said second and said  
6 fourth bracket portion;

7           each said medial spacer further including a threaded axial  
8 passage formed concentrically therethrough;

9           each said bracket portion further including at least one  
10 medial spacer attachment passage therethrough; and

11           a plurality of bracket assembly bolts securing each said  
12 bracket portion to each said medial spacer.

1       11. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein said plurality of bracket portion  
3 clamp fittings comprises:

4           at least one first end spacer disposed between said first  
5 and said third bracket portion and between said second and said  
6 fourth bracket portion;

7           at least one second end spacer disposed between said first  
8 and said third bracket portion and between said second and said  
9 fourth bracket portion;

10          each said first end spacer and each said second end spacer  
11 further including a threaded axial passage formed concentrically  
12 therethrough and a passage formed diametrically therethrough;

13          each said end of each said bracket portion further  
14 including at least one spacer attachment passage formed  
15 therethrough;

16          a plurality of bracket assembly bolts securing each said  
17 bracket portion to each said first end and second end spacer;

18          a plurality of bracket first end clamping bolts disposed  
19 diametrically through each said first end spacer;

20          a plurality of bracket second end clamping bolts disposed  
21 diametrically through each said second end spacer; and

22            each of said bolts having a head end and a nut secured  
23 opposite said head end and clamping corresponding said first end

24 and said second end spacers therebetween, thereby clamping said  
25 first through said fourth bracket portion about the rotary  
26 shaft.

1       12. The rotating shaft and lubricating system combination  
2 according to claim 9, further including a grommet disposed  
3 within each said automatic lubricator passage.

1       13. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein each said bracket portion further  
3 includes:

4           a plurality of lubrication line clearance passages formed  
5 therethrough;

6           a plurality of lubrication line anchor passages formed  
7 therethrough; and

8           each of said lubrication line anchor passages further  
9 including a bulkhead fitting installed therein.

1       14. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein each said automatic lubricator is  
3 controlled by an internal timer.

1       15. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein each said automatic lubricator is  
3 controlled by an internal receiver receiving signals from an  
4 external transmitter.

5       16. The rotating shaft and lubricating system combination  
6 according to claim 9, wherein each said bracket portion is  
7 formed of aluminum.

1       17. The rotating shaft and lubricating system combination  
2 according to claim 9, wherein said first and said second  
3 plurality of rotating bearings disposed respectively at said  
4 first and said second bearing end of said rotating drive shaft,  
5 each comprise a plurality of universal joint trunnion bearings.